

## REMARKS

### *Improper Designation as a Final Action*

As a preliminary matter, the Examiner has indicated that this office action is final. Applicant respectfully submits that it was improper for the Examiner to make this action final for at least the following reasons. MPEP § 706.07(a) states that second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is not necessitated by an Applicant's amendment of the claims. The Examiner is kindly reminded that the "applicant who is seeking to define his or her invention in claims that will give him or her the patent protection to which he or she is justly entitled should receive the cooperation of the examiner to that end, and not be prematurely cut off in the prosecution of his or her application." MPEP § 706.07 (present practice does not sanction hasty and ill-considered final rejections).

The Office cites new references, Kocher, alone and in combination with Porchia as the grounds for 102 and 103 rejections. In the prior rejection in the Office Action dated 1/3/03, the Office cited De Moor, Kurachiand and Clark as the grounds for 35 USC Section 103 rejection, while the Office Action dated 7/18/2002 used DeMoor for 35 USC Section 102 rejection. Applicant was able to substantially traverse these rejections through explanations of the teachings of the prior art in comparison to the present invention. For example, the amendments in the Response dated Jan 30 addressed mostly clarification issues and related to explaining microperforations as 'drill holes' in claim 1 and using a 'non-porous' material' in relation to the microporous technology cited by the Office. The Response dated Oct 18, 2002 was also primarily explanatory in nature and claim 1 was not even amended.

The Applicant has spent considerable time and effort in submitting the responses, preparing affidavit and teaching materials, a telephone interview, along with sending multiple exhibits to demonstrate to the Office the state of the art, and explain the fundamental differences between microporous and microperforations, which was the gist of the prior rejections.

Having successfully argued and explained that the present invention was distinguished from the previously cited art, the Office now uses newly cited art using the laminate invention of

Kocher and the microperforations of Porchia, and proposes that this be a final action. The newly cited art raises issues not previously presented, namely laminates with perforations (Kocher) and microperforations over entire packaging (Porchia) to establish the grounds for rejection. The introduction of this new art were not necessitated by an Applicant's amendment of the claims – explanations in the responses were required, but the claims are essentially the same.

Accordingly, it was improper for the Office to make this action final, and in violation of MPEP § 706.07(a). Applicant respectfully requests the Office to withdraw the finality of this action and enter the enclosed response as a matter of right.

#### **(Item 1) Withdrawn Rejection**

The Applicant thanks the Office for withdrawing the previous rejections as noted on page 2 of the Detailed Action noted as Item 1.

#### **(Item 2) Repeated Rejection 35 USC 112**

Claims 10 and 11 stand rejected by the Office as being indefinite in relation to 'upper portion' and 'lower portion'. As noted on page 9, lines 16-21, "[I]n the preferred embodiment, the optimal size, shape and number of the set of microperforations for the particular product is used for the registered target area. In most cases, the target area is a small identifiable area in an upper third or quarter of the package. More preferably, the registered microperforations are placed in any area that will not be occluded by produce or other packages during shipping and storage." And, as previously noted, the specification describes the target areas, "[M]icroperforation arrays 100 are normally positioned near what will become the upper one-quarter or one-third of the bag, as shown in FIG. 2, so when filled packages are placed in case cartons they are not occluded by adjacent packages in the carton." (Page 16, lines 11-15) Thus the upper portion refers to the location near the opening, and more specifically the claim refers to the upper one-quarter of the upper portion of the bag.

Furthermore, Figure 2 shows a single bag that is substantially enclosed with an open edge along the top, sealed sides, and a sealed bottom. The microperforation array 100 are grouped and

placed in a target area 50. The target area is shown and described in a position where occlusion or blocking is less likely. And, as detailed therein, the typical non-occlusion region is in the upper one-third or one-quarter referenced to the top.

The Office has maintained the rejection for indefiniteness with respect to the wording, although it should be sufficiently clear as to the claimed subject matter. Applicant previously amended claims 10 and 11 to include a reference to the 'upper portion' being located proximate the opening of the bag. As shown herein, Fig. 2 shows a bag 120 with sealed sides/bottom and the target area 50 being about one-third or one-quarter distance from the open edge. The Applicant is not claiming to have invented packaging bags and they are well known in the art. A definition of a bag as provided by the "Glossary of Packaging Terms" (Packaging Institute International, Herndon, VA), defines a bag as "A preformed container made of flexible material, generally enclosed on all sides except one which forms an opening . . .". This definition along with the accompanying Figure 2 should clearly illustrate the orientation described in the amended claims.

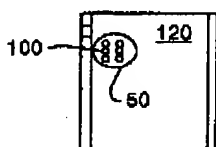


FIG. 2

While the Applicant believes the prior description was clear, the Applicant has further amended the claims and respectfully requests review and allowance. The Office is reminded that claims are not interpreted in a vacuum but in light of the specification and drawings. The amended claims presented below should sufficiently describe the precise meaning of the claimed invention.

10. (Currently Amended) The improved packaging material according to claim 7, wherein said bag is substantially enclosed ~~has an upper portion about~~ with an opening edge, side

edges, and an opposing bottom edge of said bag, and wherein said registered target area is a small identifiable area in an upper within one-quarter distance from said opening edge of said upper portion of said bag.

11. (Currently Amended) The improved packaging material according to claim 7, wherein said bag is substantially enclosed has an upper portion about with an opening edge, side edges, and an opposing bottom edge of said bag, and wherein said registered target area is a small identifiable area in an upper within one-third distance from said open edge of said upper portion of said bag.

Reconsideration and allowance is respectfully requested.

**Claims Rejections - 35 USC §102(b)**

The Office rejected claims 1-4, 8-9, 12-13 and 21 under 35 U.S.C. 102(b) as being anticipated by Kocher et al (US 5,919,547). As previously presented but useful to remember, a rejection based on anticipation requires that a single reference teach every element of the claim (MPEP § 2131). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Or stated in another way, a "claim is anticipated only if each and every element as set forth in the claim is found, . . . described in a single prior art reference." *Verdegual Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). . . .

The Office states that Kocher discloses:

"an improved packaging (col. 8, lines 61-66) for establishing optimum atmospheric conditions for respiring produce (a modified atmospheric packaging environment for fruit; col. 9, lines 5-17; col. 18, lines 55-63) comprising a polymeric material (a lid comprising a laminate; col. 10, lines 49-51) and a set of microperforations on a target area on the polymeric material (located on the lid; therefore in a registered target area; col. 17, lines 66-67; col. 18, lines 1-5), the microperforation controlling the optimum atmospheric conditions within specified oxygen and carbon dioxide concentrations (col. 18, lines 35-63). (Office Action page 3 Item 4, second paragraph)"

The Applicant respectfully submits that this is a mischaracterization of the Kocher patent and the Office has imbued properties of the present invention into Kocher that simply do not exist. The present invention deploys microperforations in a registered target area – a place to avoid occlusion - and wherein the set of microperforations control the optimum atmospheric conditions within specified O<sub>2</sub> and CO<sub>2</sub> concentrations for said respiring produce. They are not just a bunch of holes poked into a container as in Kocher, but rather the size, shape, aspect ratio and/or number of microperforations control the atmospheric conditions according to the teachings of the present invention.

Kocher employs laminates or layers of gas-permeable and gas-impermeable layers. In fact, Kocher actually provides definitions in Column 4 that should help explain the 'laminate' of Kocher and a thorough explanation of the laminate usage. Using the terminology of Kocher – "In a preferred embodiment of the invention, the laminate provides the lid for a package and delaminates into a substantially gas-impermeable portion and a gas-permeable portion, with the gas-permeable portion being bonded directly to the support member of the package. In this manner, the gas-impermeable portion may be peelably removed from the package to allow atmospheric oxygen to enter the interior of the package. In a particularly preferred embodiment, the gas-permeable portion is provided by perforating the delaminatable, coextruded film and bonding such film to the support member so that, when the laminate is caused to be delaminated within the perforated, coextruded film, the perforations are exposed to the ambient atmosphere and thereby allow for rapid ingress of oxygen into the interior of the package." (col. 4 lines 10-24)

Kocher is specifically intended to be a sealed package until a de-lamination occurs and then have air ingress via the gas-permeable layer and the perforations. This multi-layer approach of Kocher is distinguishable from the present invention. While Kocher does discuss the use of 'perforations' used in conjunction with the multi-laminate layers – the usage pertains to removing the outer layer (lid) to allow air to flow through these perforations and gas permeable layers. The perforations of Kocher are shown in Figure 6 and described in Column 17. The perforations 66 extend thru multiple layers so that when the lid is delaminated and removed (See

Figure 7) the air can flow into the package via the perforations as well as the gas-permeable layer. This provides a 'swift ingress of atmospheric oxygen' (col. 17, lines 57)

Cryovac, the assignee of the Kocher patent, is well known for their meat packaging technology. As explained in the Kocher patent and further elaborated herein, the Kocher package is designed to be used by large beef packers (such as Iowa Beef Packing) to create "case ready mcats", wherein the ground meat is placed in the container, the package is gas-flushed to remove as much oxygen from the container as possible, and the Cryovac laminate is heat-sealed to the rigid tray. The meat turns a purple/brown color under these low oxygen conditions, but the low oxygen prevents spoilage of the meat. The packages are shipped from the centralized meat packaging plant to the retail store distribution center; a trip that can take 3-4 days. The packages are then stored at the distribution center before sending to the retail stores. Therefore, the sealed meat packages can be 5-7 days old before they reach the retail store. Once these packages are in the retail store, the meat department pulls off the gas impermeable layer to expose the gas-permeable layer, which allows the meat to "bloom" before being placed for public purchase. The gas-permeable layer allows the air to rapidly move into the package to convert the myoglobin pigment of meat from the purple/brown color to its red (oxymyoglobin) state. Consumers are adverse to purchasing brown/purple meat as they believe it is spoiled, thus the primary reason for the gas-permeable layer is to aid in rapid transformation of the non-oxygenated brown pigment to an oxygenated red color.

Although Kocher states in Column 9, lines 11 thru 16 that "[w]hen product 16 is oxygen-sensitive, i.e., perishable, degradable, or otherwise changeable in the presence of oxygen, such as fresh red meat products (e.g., beef, veal, lamb, pork, etc.), poultry, fish, cheese, fruits, or vegetables, it is preferred that product 16 be packaged in a low-oxygen environment within package 10 to maximize the shelf-life of the product." The low-oxygen environment described in Kocher is not used with fresh vegetables because, unlike meats, vegetables require sufficient oxygen to carry out their aerobic metabolic processes to maintain freshness and for consumer safety concerns.

In item #6 of the Office Action, the Office makes several references to flux and OTR, wherein these units have substantially different meanings as used in the industry. In Column 5 lines 65-67, Kocher mentions using a "gas permeable" film portion which admits at least about 1000 cc of gas, such as oxygen, per square meter of film per 24 hours at 1 atm (an OTR). In the English system, an OTR of 1000 cc/ sq meter is about 65 cc/100 sq inch/day-atm - these are oxygen transmission rates (not flux rates). OTRs are area specific while the flux values are not dependent upon area as the area cancels out of the equation. In Column 6, Kocher states OTRs preferably at least 5000 to 100,000 cc/sq meter (322 cc to 6452 cc/100 sq inch)/day-atm. However, Kocher fails to define what O<sub>2</sub> and CO<sub>2</sub> levels are established in the container. There was no motivation for Kocher to establish any such values as the Kocher packaging is designed for red meat, not for fresh vegetables. Meat is dead tissue, and therefore does not respire like fresh produce. The fresh produce contributes to the formation of the atmosphere inside the package which is described in the present application that matches the respiration characteristics of the fresh produce with the flux rate of the film to obtain the optimum levels of O<sub>2</sub> and CO<sub>2</sub> inside the package. Thus, the Applicant merely wishes to point out that reference by the Office to 'an oxygen flux ranging from at least 1 cc/day-atm' in item #6 actually refers to OTR and not flux.

Taking the broadest possible interpretation of Kocher shown in Figure 7 which shows perforations - the perforations of Kocher are NOT intended to control the atmospheric conditions of the package and only intended to have oxygen enter in an undetermined amount. While Kocher references sizes (col. 17, lines 66-67; col. 18, lines 1-5), the perforations are not discussed in terms of the control of atmospheric conditions by using the size/shape and/or number of perforations. "Ideally, the perforations are large enough to permit the passage of atmospheric gas therethrough (oxygen, nitrogen, carbon dioxide), but small enough to prevent the passage of liquids or dirt."

There is no description in Kocher of employing a certain number/shape/size of the microperforations to control atmospheric conditions with the package. Thus, the lid and support member are specifically intended to be substantially gas-impermeable (col. 10, lines 8-39) until

delamination, and then allow air to enter either by the gas-permeable layer, microperforations, or both, but with no specified or intended control of the microperforation flow. The Kocher perforations are not intended to perform any atmospheric control functions.

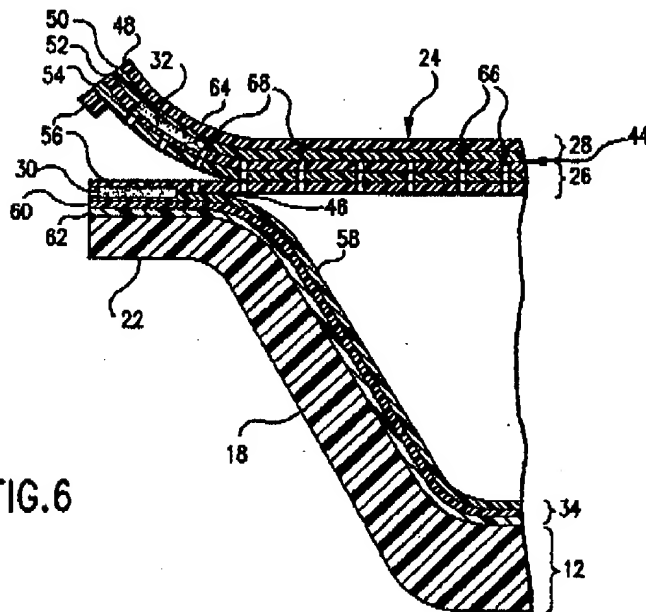


FIG. 6

Furthermore, the perforations of Kocher are throughout the lid and not in a registered target area to prevent occlusion as in the present invention. In fact, the perforations in the Kocher laminate are occluded by the gas-impermeable layer until the peelable layer is removed to expose the gas permeable layer. The Office states that the 'lid' is a registered target area, however this is not a proper equivalence as the term is used and described in the present invention and the Applicant respectfully disagrees.

In summary - the term "microperforation" is not in the Kocher patent because it does not utilize microperforations as used in the present invention to control atmospheric conditions. Kocher does not describe or in anyway intimate the use of perforations - size/shape or number - to control atmospheric conditions as described in the present invention. Furthermore - there is no description of employing a registered target area as used in the present invention. As the



present invention employs microperforations to control atmospheric conditions and in a registered target area – and this is not in the Kocher patent – the anticipation rejection cannot be maintained. Thus claims 1 and 8 are not anticipated and claims dependent thereof are also not anticipated. Reconsideration and allowance is respectfully requested.

### **Claim Rejections – 35 USC § 103**

The Office has quoted the statute from 35 USC 103(a), which is referenced herein. The Office has rejected claim 5-6, 14 and 22 as being unpatentable over Kocher. In addition, the Office states that claim 7 is rejected as being unpatentable over Kocher in view of Porchia. Applicant has carefully considered the Office rejections and respectfully submits that the claims, as supported by the arguments herein, are distinguishable from the cited references alone or in combination.

According to the MPEP §2143.01, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art."

As previously discussed, a useful presentation for the proper standard for determining obviousness under 35 USC §103(a) is illustrated as follows:

1. Determining the scope and contents of the prior art;
2. Ascertaining the differences between the prior art and the claims at issue;
3. Resolving the level of ordinary skill in the pertinent art; and
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

The Office states that Kocher discloses a microperforated packaging but fails to disclose an oxygen flux rate from 200 cc/day atm to 1,500,000 cc/day – atm and a carbon dioxide transmission rate that is 3.4 to 4.0 times greater than the oxygen transmission rate as noted in claim 5, 6, 14 and 22.

The Office contends that Kocher discloses such information, however the Applicant is unable to locate such information. The Office cites the following sections from Kocher starting on Column 17, lines 66-67 and Column 18 lines 1-5. Applicant is enclosing the entire paragraph (col. 17, lines 66-67; col. 18 lines 1-16) and would request that the Office clarify where such information is found.

Perforations 66 preferably range from about 5 to about 250 microns in diameter, more preferably 25 to 125 microns, and most preferably 75 to 100 microns in diameter. Ideally, the perforations are large enough to permit the passage of atmospheric gas therethrough (oxygen, nitrogen, carbon dioxide), but small enough to prevent the passage of liquids or dirt. The perforations may be formed by any suitable means, including the use of mechanical, chemical, or electrical devices. Non-limiting examples of such devices include those which perforate with laser energy, electrostatic discharge, ultrasonic waves, flame discharge, needles or other sharp objects, or combinations thereof. Preferred devices are those which produce laser energy or electrostatic discharge. An electrostatic discharge device operates by passing a film between a pair of electrodes and transmitting electricity to one of the electrodes in sufficient voltage that the electrode discharges through the film and to the other electrode, thereby perforating the film.

Applicant assumes that the Office is referring to the size provided in the range of 5-250 microns. Kocher desires to use some sized holes, with some shape and aspect ratio, somewhere on the lid and in some unknown quantity or number. Even if one were to employ any of the size ranges provided in Kocher, it still does not support any finding for controlling the oxygen flux rate from 200 cc/day atm to 1,500,000 cc/day - atm and a carbon dioxide transmission rate that is 3.4 to 4.0 times greater than the oxygen transmission rate as noted in claim 5, 6, 14 and 22. The control requires some indication that the number/size/shape/aspect ratio was accounted for to establish the control.

Applicant submits that Office will not be able to find any support in Kocher for control because Kocher is not intended to control the flow - this is clearly set forth in Kocher, wherein once the delamination occurs the oxygen is intended to quickly turn meat red. (col. 18, lines 64-67; col. 19 lines 1-10) There is nothing in Kocher to employ the perforations to control atmospheric conditions and no teaching to support such a finding.

The Office further takes official notice that establishing an oxygen flux rate and carbon dioxide flux would be readily determined through routine optimization. Applicant respectfully disagrees in this notice in its entirety. If it were obvious, then it should be easy for the Office to find a reference that suggests modifying Kocher to include the control of the atmosphere using microperforations as described in the present invention. Examiner is kindly reminded that "assertions of technical fact in areas of esoteric technology must always be supported by citation of some reference work" and "allegations concerning specific knowledge of the prior art, which might be peculiar to a particular art should also be supported." MPEP § 2144.03. The Applicant notes that a reference that merely discloses or suggests the general concept of perforations in plastic is not sufficient to establish a prima facie case of obviousness. Rather, the reference or references must disclose or suggest using the size/shape/number/aspect ratio (or some combination thereof) of the perforations to control the atmospheric conditions as defined by the Applicant's claim 5, 6, 14 and 22.

Finally, the routine optimization referenced by the Office is not supported by the overall function of Kocher and is therefore not in accordance with those teachings. Kocher is seeking to let air into the container to turn meat red once delamination occurs. Kocher is not seeking to establish certain atmospheric conditions according to established O<sub>2</sub> and CO<sub>2</sub> concentrations because there are no specific concentrations mentioned or implied in Kocher. The only reference to atmospheric conditions relates to the sealing of the package to be substantially impermeable to gas transfer. (col. 18, lines 35-63) There is no reference to establishing any sort of specific oxygen/carbon dioxide concentrations once delamination occurs, therefore there would be no reason to experiment in that regard. Reconsideration and allowance is respectfully requested.

Claim 7 is rejected as unpatentable over Kocher in view of Porchia. The Office acknowledges that Kocher does not disclose a microperforated bag. However the Office states that Porchia discloses a microperforated bag for controlling the weight loss of fruit stored in the bag. And further, that combining the Kocher and Porchia would result in a bag to control the weight loss of fruit.

As discussed herein, Kocher does not establish any atmospheric conditions in a bag or otherwise utilizing microperforations. Porchia, states that it is a packaging bag with microholes throughout that is "independent of product, shape, amount and transpiration characteristics of stored produce as opposed to controlled atmosphere which generally is designed for each specific packaged product." (col. 2, Lines 19-22) Thus, Porchia admits that it is not intended for controlling atmospheric conditions for specific oxygen/carbon dioxide rates.

The Porchia packaging "controls the weight loss of produce" and "localized condensation in the bag" by controlling the water vapor transmission rate of the package. Controlling weight loss for fresh produce involves establishing a water vapor transmission rate so that there is not too much moisture in the bag to cause slime formation of the tissue, and at the same time, not allowing too much moisture to escape and result in wilting/desiccation of the produce. This requires a large number of large holes in the bag to get the Padres Number needed. Thus, Porchia is specifically addressing water vapor transmission – not the oxygen/carbon dioxide concentrations as in the present invention.

Regarding location in a registered target area as described in the present invention, Porchia helps by defining their distribution. "By "uniformly distributed" it is meant that the microholes are substantially identically and substantially evenly spaced apart from each other over the entire surface area of the web film or bag." (col. 4, lines 37-40) "To obtain the beneficial effects of the present invention, the microholes should be of a uniform size and uniformly distributed throughout the surface of the bag." (col. 4, lines 34-36).

Therefore, Porchia does not control the oxygen and carbon dioxide concentration inside the bag and they also do not register the microperforations in a well-defined area on the bag as in the present invention. Taken alone or in combination with Kocher, these references do not disclose, suggest or otherwise provide a motivation to practice the claims of the present invention. Claim 1 has been amended to clarify

### *Secondary Considerations*

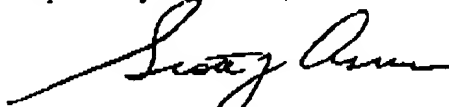
As per secondary considerations, Applicant would like to remind the Office that as noted in previous responses and in the Affidavit, the present invention has been an overwhelming success and multiple licenses have been signed and others are under negotiation. Thus, the industry and those skilled in the art, recognize the innovative aspects and the beneficial result from employing the present invention.

### *Personal Interview*

The Applicant believes that the present remarks and amendments should place the present application in condition for allowance. However, if the Office does not grant allowance, and if such objections/rejections cannot be worked out by telephone, the Applicant respectfully requests a Personal Interview. Present Office policy places great emphasis on interviews and it is desirable if the parties feel the interview will be beneficial to advance prosecution of the application, especially if a final action has been issued. It is believed that a personal interview would materially assist in placing the application in condition for allowance and Applicant respectfully requests a personal interview.

Applicant believes the above amendments and remarks to be fully responsive to the Office Action, thereby placing this application in condition for allowance. No new matter is added. Applicant requests speedy reconsideration, and further requests that Examiner contact its attorney by telephone, facsimile, or email for quickest resolution, if there are any remaining issues.

Respectfully submitted,



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